

Claims

We claim:

- 1) A purified antibody recognizing specifically a nitrosylated protein.
- 2) The antibody in Claim 1, characterized by the fact that said protein is a transporter of NO.
- 3) The antibody in Claims 1 or 2, recognizing specifically a nitrosylated albumin.
- 4) The antibody in any one of Claims 1 to 3, characterized by the fact that it is a polyclonal antibody.
- 5) The antibody in any one of Claims 1 to 3, characterized by the fact that it is a monoclonal antibody.
- 6) All of the antibodies in Claim 4 or 5.
- 7) An immunogen for preparation of the antibodies in any one of the preceding claims, characterized by the fact that it is composed of a nitrosylated carrier protein whose sequence possesses a nitrosylation site, or by a nitrosylated amino acid coupled to a carrier protein by a coupling agent selected among carbodiimide, glutaraldehyde or succinic anhydride.
- 8) The immunogen in Claim 7, characterized by the fact that the nitrosylation site or the amino acid is chosen among tyrosine, cysteine, potentially acetylated, or tryptophane.
- 9) The immunogen in one of Claims 7 or 8, characterized by the fact that the carrier protein is an albumin.

10) A process for preparation of an immunogen according to any one of Claims 8 to 9, characterized by the fact that an amino acid is coupled to a carrier protein, then the conjugate obtained is nitrosylated with an NO donor compound.

5 11) A pharmaceutical compound, characterized by the fact that it contains as its active ingredient an antibody according to any one of Claims 1 to 5 or a group of antibodies according to Claim 6 advantageously dispersed in a pharmaceutically acceptable vehicle or excipients.

10 12) The use of an antibody according to any one of Claims 1 to 5 or a group of antibodies according to Claim 6 or a compound according to Claim 11, for the preparation of a drug designed to treat or prevent a pathology in which NO, its derivatives or conjugates are involved.

15 13) A process for *in vitro* detection of nitrosylated proteins in a biological specimen comprised of at least the following steps :

- putting the sample in contact with at least one antibody according to any one of Claims 1 to 5 or a group of antibodies according to Claim 6, which may be marked, under conditions that permit the formation of immunological complexes;

20 - detection of an antigen-antibody immunological complex by physical or chemical methods.

14) a kit for use of the process in Claim 13, characterized by the fact that it contains :

25 - at least one antibody according to any one of Claims 1 to 5 or a group of antibodies according to Claim 6 which may be marked,

- reagents to produce a medium favorable for an immunological reaction between said antibody and any nitrosylated proteins that may be present in a biological specimen

30 - potentially one or more reagents for detection, which may be marked and can react with any immunological complexes that may be formed;

- potentially one or more biologic reagents for reference and control.